

FOREIGN HONEY BEES.

BY ALBERT JOHN COOK, LANSING, MICH.

The Cyprian bees were first imported from Cyprus into Europe by Count Kolowrat of Hrobý and Herr Cori of Brúx, Bohemia, and were pronounced by these and other experts in apiculture, as superior to both the German and Italian races. In the winter of 1879-80, Messrs. A. D. Jones, of Breton, Ontario, Canada, who has made a fortune as a bee keeper, and Frank Benton, a graduate of the Michigan Agricultural College, and one of the best-read bee keepers of the world (who reads regularly the agricultural periodicals of Germany, France, Italy and England, as well as those of our own country), set sail for Asia, that they might establish an apiary in Cyprus, and introduce the Cyprian and Syrian bees directly from their native habitats into America. Mr. Jones returned in mid-summer of 1880, with about three hundred colonies of Cyprian and Holy-Land bees, while Mr. Benton remained in Cyprus to superintend a large apiary at Larnaca, and ship queens from the island to Europe and America.

The bees, both from Cyprus and Syria, are, like the Italian race, banded with yellow, and seem more like the Italian bees than they do like the much more yellow Egyptian bee. In temperament and habits too they are much like the well known Italians.

Mr. Benton, who is a close, accurate student of science, thinks that the Cyprian bees were probably introduced from Palestine many years—possibly centuries—ago, and have developed, in their

isolated island home, strong race peculiarities. He also believes that the Italians are the offspring of the Cyprians.

The Cyprian bees closely resemble the Italians, except that the workers are a little smaller, and more yellow on the ventral side of their abdomens. The drones and queens can hardly be distinguished from those of the Ligurian or Italian race, except that they are more uniform, which we should expect, owing to the close in and in breeding necessitated by the limited territory of the island. The common opinion of those who have tried these bees is, that they are more prolific and active than even the Italians. This is as we should expect, as "survival of the fittest" would work powerfully to improve bees on so restricted an area, and where the seasons are often, like that of 1880, exceedingly dry.

The workers of the Syrian race are very plainly banded, because of the gray fuzz on each ring, otherwise they closely resemble the Italians. The queens are very obviously banded with dark and yellow, and are remarkably uniform. The drones are dark, and covered with a heavy gray fuzz. They resemble our common black drones more than they do either those of the Italians or Cyprians.

These bees, natives of an arid barren region, have also felt the severe hand of competition, and really promise to be a very valuable acquisition to the apiaries of the United States.

Not content with the valuable service thus far rendered, Mr. Benton has, the present winter, visited Ceylon, Farther

India, the Philippine Islands, and Java, hoping to add still further to the valuable importations of exotic bees. He took Cyprian and Holy-Land bees along, in our improved hives, and left some at each place of landing. He has been received with marked favor by the several governmental authorities.

At Ceylon, Mr. Benton secured the diminutive *Apis indica*. The bodies of the workers are only 1 cm. long; the thorax is brown, the shield or crescent between the wings is large and yellow; the abdomen, beneath, is yellow, and above is beautifully banded throughout its entire length with brown and yellow. These bees are very little inclined to sting, and when they do sting the effect is slight, owing to the very small size of the sting.

The queens are very large compared with the workers, are of a dark copper color, and seem astonishingly prolific. I have received some of the comb from Mr. Benton. The small cells, less than one-half of a cm. in diameter, give a dainty appearance to the comb, which is very interesting.

These bees, from their small size, great beauty, amiable tempers, and the possibility that they can work on flowers inaccessible to our larger bees, will be received with no little eagerness by American apiarists.

At the time of Mr. Benton's last letter he had not yet succeeded in procuring the large *Apis dorsata*, which was the great attraction which led to this laborious and expensive journey. But he had learned where they were to be found on the island of Ceylon and in Java. These bees suspend their combs vertically to the limbs of trees, often for a distance of a metre or more. Great stories are told of the large amount of honey which these bees store, and now for the first time we shall not only get reliable information of their habits and value, but, if the undertaking is practicable, we shall have them imported to our own American apiaries. Surely it is something to be proud of, that it was left for American enterprise to first introduce these long coveted species into the civilized countries of the world.

A FRAGRANT BUTTERFLY.

BY MARY ESTHER MURTFELDT, KIRKWOOD, MO.

In a paper on Brazilian butterflies, read before the London Entomological Society, 5 June 1878, by Dr. Fritz Müller, great prominence is given to the odors of the male butterflies, which the author considers as an especial sexual attraction.

Some years before the publication of this paper, in spreading fresh males of *Callidryas eubule*, I had been struck with the delicate violet-like odor which was emitted, and which was retained, to some extent, for several days. I have

repeatedly observed the same quality since and always in the males. The females are not in the smallest degree fragrant. This is the only species, common with us, which, so far as I am aware, possesses this attribute, and as it belongs to a genus mainly represented in South American species, it may be simply the inheritance of a characteristic of use to its congeners in the forests of Brazil and not of any especial service to it in its present habitat.